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**Art Unit: 1756**

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**From : Winston Hsu, Registration No. 41,526**

**Serial No.: 10/708,946**

**Attorney Docket No.: NAUP0493USA1**

**Subject: Information Disclosure Statement (IDS)**

**Total Pages: 81 pages (including cover page)**

**Winston Hsu 2005/11/24**

**NAUP0493USA1\_D1\_3**

PTO/SB/21 (09-04)

Approved for use through 07/31/2008. OMB 0651-0031  
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**TRANSMITTAL FORM**

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

|  |                      |
|--|----------------------|
| Application Number                       | 10/708,946           |
| Filing Date                              | 04/02/2004           |
| First Named Inventor                     | Jiunn-Ren Hwang      |
| Art Unit                                 | 1756                 |
| Examiner Name                            | YOUNG, CHRISTOPHER G |
| Total Number of Pages in This Submission | 80                   |
| Attorney Docket Number                   | NAUP0493USA1         |

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**ENCLOSURES (Check all that apply)**

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| <input type="checkbox"/> Fee Attached  | <input type="checkbox"/> Licensing-related Papers                         | <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences     |
| <input type="checkbox"/> Amendment/Reply   | <input type="checkbox"/> Petition   | <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) |
| <input type="checkbox"/> After Final   | <input type="checkbox"/> Petition to Convert to a Provisional Application | <input type="checkbox"/> Proprietary Information  |
| <input type="checkbox"/> Affidavits/declaration(s)   | <input type="checkbox"/> Power of Attorney, Revocation                    | <input type="checkbox"/> Status Letter  |
| <input type="checkbox"/> Extension of Time Request   | <input type="checkbox"/> Change of Correspondence Address                 | <input type="checkbox"/> Other Enclosure(s) (please identify below):                    |
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| <input checked="" type="checkbox"/> Information Disclosure Statement                               | <input type="checkbox"/> Request for Refund                               |   |
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| <input type="checkbox"/> Reply to Missing Parts/Incomplete Application                             | <input type="checkbox"/> Landscape Table on CD                            |   |
| <input type="checkbox"/> <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53 | <input type="checkbox"/> Remarks  |   |

**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

|              |   |          |        |
|--------------|---|----------|--------|
| Firm Name    | North America Intellectual Property Corporation |          |        |
| Signature    | <i>Winston Hsu</i>                              |          |        |
| Printed name | Winston Hsu                                     |          |        |
| Date         | 11/24/2005                                      | Reg. No. | 41,526 |

**CERTIFICATE OF TRANSMISSION/MAILING**

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

|                       |                  |      |            |
|-----------------------|------------------|------|------------|
| Signature             | <i>Cindy Lin</i> |      |            |
| Typed or printed name | Cindy Lin        | Date | 11/24/2005 |

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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PTO/SB/17 (12-04)

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Effective on 12/08/2004.

Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

## FEE TRANSMITTAL For FY 2005

 Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$ 0.00)

**Complete If Known**

|                      |                      |
|----------------------|----------------------|
| Application Number   | 10/708,946           |
| Filing Date          | 04/02/2004           |
| First Named Inventor | Jiunn-Ren Hwang      |
| Examiner Name        | YOUNG, CHRISTOPHER G |
| Art Unit             | 1756                 |
| Attorney Docket No.  | NAUP0493USA1         |

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 under 37 CFR 1.16 and 1.17

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**FEE CALCULATION****1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

| Application Type | FILING FEES |                       | SEARCH FEES |                       | EXAMINATION FEES |                       | Fees Paid (\$) |
|------------------|-------------|-----------------------|-------------|-----------------------|------------------|-----------------------|----------------|
|                  | Fee (\$)    | Small Entity Fee (\$) | Fee (\$)    | Small Entity Fee (\$) | Fee (\$)         | Small Entity Fee (\$) |                |
| Utility          | 300         | 150                   | 500         | 250                   | 200              | 100                   |                |
| Design           | 200         | 100                   | 100         | 50                    | 130              | 65                    |                |
| Plant            | 200         | 100                   | 300         | 150                   | 160              | 80                    |                |
| Reissue          | 300         | 150                   | 500         | 250                   | 600              | 300                   |                |
| Provisional      | 200         | 100                   | 0           | 0                     | 0                | 0                     |                |

**2. EXCESS CLAIM FEES****Fee Description**

Each claim over 20 or, for Reissues, each claim over 20 and more than in the original patent

Each independent claim over 3 or, for Reissues, each independent claim more than in the original patent

Multiple dependent claims

| Total Claims   | Extra Claims | Fee (\$) | Fee Paid (\$) | Multiple Dependent Claims | Fee (\$) | Small Entity Fee (\$) |
|--|--------------|----------|---------------|---------------------------|----------|-----------------------|
| - 20 or HP =   | x            | =        |               |                           | Fee (\$) | Fee (\$)              |
| HP = highest number of total claims paid for, if greater than 20 |              |          |               |                           |          |                       |
| Indep. Claims  | Extra Claims | Fee (\$) | Fee Paid (\$) |                           |          |                       |

- 3 or HP =  x  =

HP = highest number of independent claims paid for, if greater than 3

**3. APPLICATION SIZE FEE**

If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

| Total Sheets | Extra Sheets | Number of each additional 50 or fraction thereof | Fee (\$) | Fee Paid (\$) |
|--------------|--------------|--|----------|---------------|
| - 100 =      | / 50 =       | (round up to a whole number) x                   |          | =             |

**4. OTHER FEE(S)**

Non-English Specification. \$130 fee (no small entity discount)

Other: submission of Information Disclosure Statement

Fees Paid (\$)

0.00

**SUBMITTED BY**

|                   |                    |                                      |        |           |              |
|-------------------|--------------------|--------------------------------------|--------|-----------|--------------|
| Signature         | <i>Winston Hsu</i> | Registration No.<br>(Attorney/Agent) | 41,526 | Telephone | 302-729-1562 |
| Name (Print/Type) | Winston Hsu        |                                      |        | Date      | 11/24/2005   |

This collection of information is required by 37 CFR 1.138. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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PTO/SB/08A (08-03)

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|  |      |                          |                      |
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| Substitute for form 1449/PTO   |      | <b>Complete if Known</b> |                      |
| <b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br><i>(Use as many sheets as necessary)</i> |      | Application Number       | 10/708,946           |
|  |      | Filing Date              | 04/02/2004           |
|  |      | First Named Inventor     | Jiunn-Ren Hwang      |
|  |      | Art Unit                 | 1756                 |
|  |      | Examiner Name            | YOUNG, CHRISTOPHER G |
|  |      | Attorney Docket Number   | NAUP0493USA1         |
| Sheet 1  | of 1 |                          |                      |

U. S. PATENT DOCUMENTS

## **FOREIGN PATENT DOCUMENTS**

| Examiner Initials* | Cite No. | Foreign Patent Document   | Publication Date<br>MM-DD-YYYY | Name of Patentee or<br>Applicant of Cited Document | Pages, Columns, Lines,<br>Where Relevant Passages<br>Or Relevant Figures Appear | T# |
|--------------------|----------|---|--------------------------------|--|---|----|
|                    |          | Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known) |                                |  |   |    |
|                    | 1        | JP 5-19446  | 01-29-1993                     |  | all   | +  |
|                    | 2        | JP 6-266095   | 09-22-1994                     |  | all   | +  |
|                    | 3        | JP 11-102063  | 04-13-1999                     |  | all   | +  |
|                    |          |   |                                |  |   |    |
|                    |          |   |                                |  |   |    |
|                    |          |   |                                |  |   |    |
|                    |          |   |                                |  |   |    |

|                       |                    |  |
|-----------------------|--------------------|--|
| Examiner<br>Signature | Date<br>Considered |  |
|-----------------------|--------------------|--|

<sup>1</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>2</sup>Applicant's unique citation designation number (optional). <sup>3</sup>See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>4</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>5</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>6</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>7</sup>Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

**PATENT****IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants: Jiunn-Ren Hwang, Jui-Tsen Huang, Chang-Jyh Hsieh

5 Filing Date: 04/02/2004

Art Unit: 1756

Serial No.: 10/708,946

Docket No.: NAUP0493USA1

Examiner: YOUNG, CHRISTOPHER G

10 Confirmation No.: 2945

Title: OPTICAL PROXIMITY CORRECTION METHOD

To: Commissioner for Patents

15 P.O. BOX 1450  
Alexandria, VA 22313-1450

Subject: Information disclosure statement under 37 C.F.R. §1.56.

20

Dear Sir:

This is an Information Disclosure Statement in accordance with the duty to disclose information material to patentability under 37 CFR 25 §1.56. The applicant wishes to make of record the document(s) listed on the accompanying form PTO/SB/08.

Since this IDS is filed after the mailing date of the first Office action but before final Office action, consideration of the information 30 disclosure statement is hereby requested according to 37 CFR §1.97(c).

That each item of information contained in the information

disclosure statement was first cited in an Office communication mailed on 2005/09/20 for the counterpart Japan patent application No. 2003-132557, which is no more than three months prior to the filing of the information disclosure statement.

5

According to the requirement set forth in 37 C.F.R. §1.98 and M.P.E.P. 609, the applicants are submitting a copy of the cited reference (Japan patents publication No. 11-102063, 5-19446, and 6-266095) and their English language abstracts hereinafter.

10

The abstract of the application (Japan patents publication No. 11-102063) is hereby presented to fulfill the information disclosure statement requirement set forth in 37 C.F.R. §1.98 and M.P.E.P. 609. The English language abstract of the application (Japan patents publication No. 11-102063) is listed as follows:

#### PROBLEM TO BE SOLVED:

To improve the transfer accuracy of intricate and fine patterns formed on an optical mask by patterning the phase shift film on a mask substrate 20 to the shapes resembling the plane shape with the circuit patterns to be formed on a semiconductor wafer or the inversion patterns thereof.

#### SOLUTION:

Metallic layers 3 are patterned and formed to prescribed shapes on the 25 main surface of the mask substrate 2 constituting a mask 1a. The original picture of integrated circuit patterns is composed of light shielding regions A and transmission regions B. The one transmission region B comprises a part coated with a transparent film (a) and a part not formed with this transparent film 4a. At the time of exposure, a 30 phase difference of 180° is induced between the phase of the light transmitted through the transparent film 4a out of the light which is cast on the mask 1a and is transmitted through the one transmission region B

and the phase of the light transmitted through the ordinary transmission regions B. These light rays weaken each other in the boundary parts between the light shielding regions A and the transmission regions B and, therefore, unsharpness is reduced.

5

The abstract of the application (Japan patents publication No. 5-19446) is hereby presented to fulfill the information disclosure statement requirement set forth in 37 C.F.R. §1.98 and M.P.E.P. 609. The English language abstract of the application (Japan patents publication No. 5-19446) is listed as follows:

**PURPOSE:**

To provide the reduction stepping method which allows exposing of diversified and fine patterns in the process for production of the semiconductor device or semiconductor integrated circuit device.

**CONSTITUTION:**

This method consists in executing reduction stepping by using a phase shift mask provided with prescribed correction patterns 101b at the ends 20 of a mask pattern region of a specified mode or in the boundary parts of the mask pattern regions of plural modes. Since an end effect, etc., are offset by the correction patterns, the exposing of the diversified and fine patterns is executed.

25 The abstract of the application (Japan patents publication No. 6-266095) is hereby presented to fulfill the information disclosure statement requirement set forth in 37 C.F.R. §1.98 and M.P.E.P. 609. The English language abstract of the application (Japan patents publication No. 6-266095) is listed as follows:

30

**PURPOSE:**

To eliminate a defect generated from the non-uniformity of a thin layer

of chromium of a damping phase shift type reticle.

**CONSTITUTION:**

This reticule 20 is provided with a secondary resolution pattern 22 in an  
5 area other than a graphic part to be formed. By the secondary resolution  
pattern 22, the radiation light of practically uniform and attenuated  
intensity is transmitted. By the graphic part, phase shift is performed to  
the secondary resolution pattern 2 as the following. That is, the phase of  
light passed through the graphic parts is shifted for about 180° to the  
10 phase of the radiation light passed through the secondary resolution  
pattern 2 surrounding the graphic parts and attenuated.

15

Respectfully submitted,

*Winston Hsu*

20

Date: October 04, 2005

Winston Hsu, Patent Agent No. 41,526

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D.C. is 13 hours behind the Taiwan time, i.e. 9 AM in D.C. = 10 PM in Taiwan.)

30